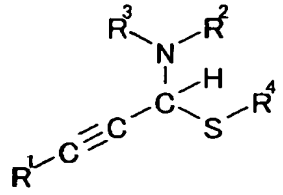
CLAIMS:

1. An alkynyl S,N-acetal derivative comprising the following structural formula:



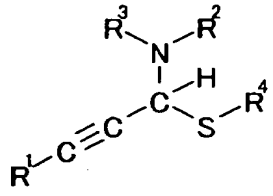
wherein R^1 represents a hydrogen atom, an alkyl group, an aryl group, an alkenyl group, a silyl group, or an alkynyl group; each of R^2 and R^3 represents an alkyl group or an allyl group; and R^4 represents an alkyl group.

2. The alkynyl S,N-acetal derivative according to claim 1, wherein R^1 represents an alkyl group, an aryl group, an alkenyl group, or a silyl group.

3. The alkynyl S,N-acetal derivative according to claim 1, wherein each of R^2 and R^3 represents an alkyl group.

4. The alkynyl S,N-acetal derivative according to claim 1, wherein R^1 represents an alkyl group, an aryl group, an alkenyl group, or a silyl group; and each of R^2 and R^3 represents an alkyl group.

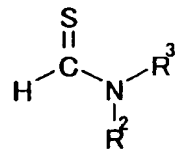
5. A method of producing an alkynyl S,N-acetal derivative of the following structural formula (1):



···(1)

wherein R^1 represents a hydrogen atom, an alkyl group, an aryl group, an alkenyl group, a silyl group, or an alkynyl group; each of R^2 and R^3 represents an alkyl group or an allyl group; and R^4 represents an alkyl group, the method comprising:

mixing thioformamide and an alkylating agent in a solvent to react the thioformamide and the alkylating agent, the thioformamide being represented by the following structural formula (2):



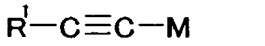
···(2)

the alkylating agent containing a compound represented by the following structural formula (3):

···(3)

and X representing a perfluoroalkylsulfonate; and

further adding an alkynyl metal reacting agent into the solvent to react a reaction product of the thioformamide and the alkylating agent with the alkynyl metal reacting agent, the alkynyl metal reacting agent containing a compound represented by the following structural formula (4):



···(4)

and M representing an alkali metal atom.

6. The method according to claim 5, wherein X in the structural formula (3) represents a triflate ion.

7. The method according to claim 5, wherein M in the structural formula (4) represents a lithium atom.

8. The method according to claim 5, wherein the solvent is diethyl ether or tetrahydrofuran.

9. The method according to claim 5, wherein the reaction product of the thioformamide and the alkylating agent is reacted with the alkynyl metal reacting agent under an atmosphere of a temperature of 0 to 30°C.

10. The method according to claim 5, wherein the reaction

product of the thioformamide and the alkylating agent is reacted with the alkynyl metal reacting agent over a period of 15 to 60 minutes.